



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

EPA Region 5 Records Ctr.



206993

REPLY TO THE ATTENTION OF:

October 8, 1992

HSRL-6J

John P. Imse, P.G.  
Project Manager  
ERM-North Central, Inc.  
540 Lake Cook Road  
Suite 300  
Deerfield, Illinois 60015

Re: Lenz Oil Site, Lemont, Illinois  
Remedial Investigation/Feasibility Study (RI/FS)  
Alternatives Array Document

Dear Mr. Imse:

The United States Environmental Protection Agency (U.S. EPA) and the Illinois Environmental Protection Agency (IEPA) have reviewed the Alternatives Array Document for the Lenz Oil Site in Lemont, Illinois. This document was submitted by ERM-North Central, Inc., on behalf of the Lenz Oil Participating Respondents. We have enclosed our comments which must be addressed and incorporated into the Feasibility Study Report. The ARARs identified in the enclosed comments are general in nature and are designed to provide the basic framework from which appropriate alternatives can be developed. Detailed requirements such as emission limitations or discharge limits cannot be provided without specific engineering design details.

If you have any questions in this regard, please do not hesitate to contact me at (312) 353-9236.

Sincerely yours,

*Nan Gowda*

Nan Gowda, P.E.  
Remedial Project Manager

Enclosure:

cc: Tracy Fitzgerald, IEPA  
Mark Furse, KMZ

**LENZ OIL SITE, LEMONT, ILLINOIS**  
**Remedial Investigation/Feasibility Study**  
**Comments on the Alternatives Array Document**

**Comments by the United States Environmental Protection Agency**

**GENERAL COMMENTS**

1. The AAD identifies three exposure pathways with unacceptable risks at the site: (1) the ingestion of contaminated ground water, (2) the ingestion of contaminated soil, and (3) dermal contact with contaminated soil. The draft baseline risk assessment (RA) identifies three additional exposure pathways with unacceptable risks at the site: (1) the inhalation of vapors from contaminated soil, (2) the inhalation of vapors from contaminated ground water, and (3) dermal contact with contaminated ground water (PRC, 1992). The three additional exposure pathways identified in the draft baseline RA should also be considered in the feasibility study for the site.
2. The AAD discusses nonaqueous phase liquids (NAPL) as a potentially contaminated medium, rather than as contaminants in ground water at the site. NAPLs do not occur naturally in aquifers at the site and are themselves contaminants. The FS should consider NAPLs as contaminants in the ground water rather than as a potentially contaminated medium that is separate from the ground water.
3. The AAD refers to some contaminants as "unknown Tentatively Identified Compounds (TIC)." However, the document does not define TICs. The term "unknown TIC" should be clearly defined in the document.
4. Complete citations of all references are not provided in the document. A complete list of all sources cited in the document should be included in the document.
5. Based on the risk assessment report, additional remedial response objectives, as required, may need to be included in the FS Report. Restoration of the contaminated aquifer must be included as a remedial response objective and clean-up levels must be established as necessary. Note that the remediation levels should generally be attained throughout the contaminant plume.
6. Remediation of hot-spot locations (removal and disposal or incineration of contaminated soils) within and outside of the main excavation area must be discussed and included as a remedial alternative.

**SPECIFIC COMMENTS**

1. Page 1-5, Paragraph 1, Line 2. The drainage ditch referred to in the text is not shown in Figures 1-1 through 1-3. The location of the ditch should be shown in all relevant figures.
2. Page 1-8, Paragraph 2, Lines 8 through 12. The text discusses the presence of other contaminant sources downstream from the site; however, such sources are not described. The AAD should provide a detailed description of the nature, size, and exact location of the sources downstream from the site.
3. Page 1-10, Paragraph 1, Line 6. The text refers to the "ultimate fate" of contamination but does not describe what that fate involves.
4. Figures 1-1 through 1-4. The direction of flow in the Des Plaines River should be clearly shown in all relevant figures.
5. Page 2-1, Paragraph 2, Lines 6 and 7. The text indicates that the remedial actions proposed in the AAD are designed to mitigate any further effects on ground water, surface water, and sediments. The protection of human health and the environment, including animal and plant life, should also be considered in the evaluation of remedial alternatives.
6. Page 2-11, Paragraph 4, Lines 2 and 3. The text is ambiguous because it may be read to mean that the production of methane gas in anaerobic treatment is less than that in aerobic treatment, which is incorrect. Between aerobic and anaerobic biological treatment processes, only the anaerobic process produces methane gas. This ambiguity in the text should be corrected.
7. Page 2-12, Paragraph 3. The text does not discuss the possible impacts associated with the on-site reinfiltration of water. Reinfiltration of treated ground water at the site would increase the volume of ground water to be treated, ultimately increasing the time and cost of remediating the site. The text should include these impacts associated with the on-site reinfiltration of treated ground water.
8. Page 2-13, Paragraph 2, Line 1. The text mentions the "remaining process options" but does not define what is meant by "remaining." The text should clarify this term and should discuss all remaining process options.

9. Page 2-13, Paragraph 3, Line 5. PRC believes that this line contains a typographical omission. The text should be corrected to read "Based on the chemical characteristics of contaminants found at the site, . . ."
10. Page 2-14, Paragraph 1, Line 3. The text discusses a low-permeability membrane cap that is not discussed in earlier sections of the AAD. The process options discussed in the AAD should be consistent throughout the document.
11. Table 2-4. The table should be revised to include all exposure pathways associated with significant health risks, that are identified in the draft baseline RA.
12. Table 2-5. The process options presented in this table should be characterized as in situ or ex situ processes, as appropriate. The results of evaluating technologies and process options should also be presented in this table.
13. Table 2-5, Page 1 of 2. The table should be revised to indicate that biological treatment is itself a remedial technology and not a process option under soil flushing. In addition, soil flushing process options should be presented. Relevant changes should also be made in the text.
14. Table 2-6, Page 1 of 2. Non-enhanced soil flushing presented in this table was not listed in Table 2-5. The process options discussed in the AAD should be consistent throughout the document.
15. Page 3-1, Paragraph 2. The "no action" alternative is mentioned in the AAD but the need for a "no action" alternative is not provided. The AAD should discuss the reason for including the "no action" alternative.
16. Page 3-2, Paragraph 1, Lines 9 and 10. The text indicates that discharging ground water to the publicly owned treatment works (POTW) may be the preferred treatment option because the POTW is close to the site and associated treatment costs may be low. However, the text does not describe the location of the POTW with respect to the site and does not provide information on costs associated with discharging ground water to it. The document should provide more information on the location and treatment costs to support discharging ground water to the POTW as a preferred option.
17. Page 3-2, Paragraph 2, Lines 3 and 4. The statement that a cap would impede on-site discharge of treated ground water via sprinkling or infiltration trenches is only partially correct. A cap would definitely impede the discharge of

ground water via sprinkling; however, infiltration trenches can be designed to allow water discharge while the cap is in place. The text should be revised to reflect this possibility.

18. Page 3-3, Paragraph 3. Using a hydraulic barrier in conjunction with ground-water collection would increase the volume of ground water to be collected and treated, thereby increasing the time and cost of site remediation. The text should discuss the impacts of using a hydraulic barrier in conjunction with ground-water collection.
19. Page 3-5, Paragraph 3. The text states that monitoring would include both on-site and off-site sampling of the near surface aquifer, and off-site sampling of surface water and sediments associated with the drainage ditch. The surface water and sediment in the Des Plaines River should also be monitored to determine if the contaminant plume reaches the river during site remediation.
20. Solvents accepted and stored at Lenz Oil include methyl ethyl ketone, toluene, xylene, butanol, ethyl acetate, and acetone, as well as the F001 and F002 spent chlorinated solvents, trichloroethylene, 1,1,1-trichloroethane and methylene chloride. RCRA ARARs will be applicable to contaminated soil and groundwater if any of these constituents are present.
21. Table 2-1 must be updated to include the MCLs and MCLGs for several contaminants such as Antimony, Beryllium, Bis(2-ethylhexyl)phthalate, Butyl benzylphthalate, Chloroform, Methylene Chloride, and Nickel.
22. 40 CFR 264 subpart AA requires air strippers to reduce total organic emissions below 3 pounds per hour or by 95% by weight.

**LENZ OIL SITE, LEMONT, ILLINOIS**  
**Remedial Investigation/Feasibility Study**  
**Comments on the Alternatives Array Document**

**Comments by the Illinois Environmental Protection Agency**

1. Management of all contaminated soil, sediment and ground water should meet the requirements of 35 IAC 700-729, as the contamination at the site is the result, in part, of the mismanagement of listed spent solvents.
2. A scaled drawing showing the location of the compacted backfill area referenced in Section 1.2.3 should be included in the Feasibility Study (FS) Report.
3. A scaled drawing showing the location of the main excavation area referenced in Section 1.2.3 should be included in the Feasibility Study (FS) Report.
4. The last paragraph of Section 1.2.4 should identify what the source of water is for the residents within at least a 2-mile radius of the facility.
5. The last statement of the first paragraph on page 1-9 states that the NAPL is considered hazardous by characteristic. In addition, the NAPL would also appear to be a listed hazardous waste, as it is contaminated with listed solvents which were managed at the facility.
6. The solubility of the various constituents of the NAPL will also determine whether any contaminants in the NAPL will partition in to the ground water, in addition to the octanol-water coefficient mentioned in the first paragraph in Section 1.4.
7. Table 2-1 and Section 2.2.1.1 (Chemical-Specific Requirements) should also include the requirements of 35 IAC 620, Groundwater Standards.
8. Discharge of treated groundwater via sprinkling or infiltration trenches stated in the first paragraph of page 2-15 would be required to follow permit requirements from the IEPA's Division of Land Pollution Control.
9. Section 2.2.1.1 must address soil clean-up objectives.
10. Table 2-3 should address the following:
  - a. "Air Stripping" must follow permit requirements from the IEPA's Division of Air Pollution Control.
  - b. "Direct Discharge of Treatment System" and "Discharge to the Publicly owned Treatment Works" require that any treatment works be operated by a certified operator.

- c. Discharge to POTW will require an agreement with the Division of the Water Pollution Control which follows the NPDES requirements.
- 11. Capping of the site discussed on page 2-8 must meet the requirements of 35 IAC 724.410 and 725.410.
- 12. Access restriction, as mentioned on page 2-9 will probably have little or no effect on the risk of being exposed to ground water.
- 13. The following are additional ARARs that may be applicable:
  - a. Illinois requirements for NPDES discharges - IAC, Subtitle B, Chapter I.
  - b. Illinois requirements for air pollution prevention - organic and fugitive/particulates emissions IAC Subtitle B.
  - c. Illinois Ground water Quality Standards - 35 IAC Subtitle F; Surface Water Quality Standards - 35 IAC Subtitles B & C.
  - d. CAA National Ambient Air Quality Standards (40 CFR 50).